

PHASE CHANGE THERMAL INTERFACE MATERIAL

ABSTRACT

A thermal interface material (A) transfers heat from a heat source (12), such as a microprocessor, to a heat sink (14) for maintaining the microprocessor at a safe operating temperature. The interface material includes thermally conductive filler particles dispersed in a phase change material. The phase change material softens and flows at the operating temperature of the heat source, thereby providing good thermal contact with uneven surfaces of the heat source and heat sink, without excessive exudation and loss of the interface material. The phase change material includes a polymer component, such as an elastomer, and a melting point component, which adjusts the softening temperature of the phase change material to the operating temperature of the heat source.